

DOCUMENT RESUME

ED 269 918

EC 182 702

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 TITLE National Geographic Gifted Program, 1982-83. Final Evaluation Report.
 INSTITUTION New York City Board of Education, Brooklyn. Office of Educational Assessment.
 PUB DATE 83
 NOTE 55p.; Prepared by the Instructional Support Evaluation Unit. Appendix A contains broken type.
 PUB TYPE Reports - Evaluative/Feasibility (142)
 EDRS PRICE MF01/PC03 Plus Postage.
 DESCRIPTORS Anthropology; Archaeology; *Community Resources; Demonstration Programs; Elementary Education; *Gifted; Learning Activities; *Social Studies; Sociology; Talent; *Units of Study

ABSTRACT

The report presents evaluation data on a program designed to use National Geographic Society materials (periodicals, filmstrips, maps, etc.) as part of a curriculum on African cultures for gifted students (grades 5-6). Among program goals were to develop pupil skills and knowledge horizontally and vertically; to introduce anthropology, sociology, and archaeology as subjects in the elementary curriculum; and to encourage institutional involvement in the educational process. The program featured regular staff development and field trips (including a visit to Kenya). Evaluation methodology included a review of program documents and materials; analysis of weekly teacher logs; and questionnaire observations. Results indicated that the materials were judged to be of good quality; there was not quantitative evidence that the program had a positive influence on cognitive skills development; and use of consultants, experts, and area resources was built into all of the curriculum units. Recommendations were made for program improvement, including that curriculum unit tests be developed to measure student performance. Appended materials include an outline of the pilot program and sample evaluation forms. (CL)

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FINAL EVALUATION REPORT
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NATIONAL GEOGRAPHIC GIFTED PROGRAM
1982-83

Office of the Chancellor
Gifted and Talented Programs

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NATIONAL GEOGRAPHIC GIFTED PROGRAM

EVALUATION SUMMARY, 1982-83

The National Geographic Gifted Program was designed to use National Geographic Society materials (periodicals, filmstrips, maps, etc.) supplemented by other appropriate materials and resources as the basis for a curriculum focusing on African Cultures. The instructional units in the curriculum emphasized concepts, methods, and analytical models associated with anthropology, archaeology, and sociology. In 1982-83, the second year of the program, 11 public schools and two private schools in seven New York City community school districts participated in the program. The 1982-83 operating budget consisted of \$85,000 in tax levy funds and \$4,000 in materials and consultant services from the National Geographic Society. The program also received support in the form of one-third fare reductions on British Airlines for the spring, 1983, trip to Kenya, Africa.

The program's goals were to:

- prepare gifted pupils as world leaders and citizens of the world;
- eliminate cultural and class barriers (pupil-pupil, teacher-pupil) through the study of various cultures and values clarification;
- develop a global approach to understanding history and current events;
- develop pupil problem solving strategies;
- develop a replicable and disseminable curriculum; and
- develop the pupil as a self-teacher.

The evaluation analyzed the impact of the use of National Geographic Society materials in fifth and sixth grade classes of gifted and talented students. The major areas of emphasis in the evaluation were:

- the degree to which National Geographic materials met the need for global and multicultural studies curriculum materials for gifted and talented classes;
- the knowledge teachers and students gained from using National Geographic Society materials;
- the extent to which students' acquisition of cognitive skills such as analysis, synthesis, and evaluation, was enhanced and reinforced;
- the utilization of non-school resources such as geographically accessible museums, university facilities, and expert professionals as additional enrichment; and

- the utilization of National Geographic Society materials in regular classes in the participating schools.

The students were enthusiastic about the materials as well as the numerous related activities and projects that were scheduled. School principals, district coordinators of gifted and talented education, and program teachers were highly positive about the usefulness of the materials. However, according to the survey findings, National Geographic Society materials met only some of the need for global and multicultural studies curriculum materials for gifted and talented classes.

The majority of the teacher respondents perceived that the knowledge and cognitive skills of the students were improved. It was apparent in the classroom observations that students were learning. The program made good use of non-school resources such as museums and expert professionals in the metropolitan area. The sharing and use of National Geographic Society materials in regular classes in the participating schools was limited, perhaps because the materials were in short supply and were husbanded by program teachers. The area in most need of strengthening was documentation of the program. Basic information about the program was not written down by the program administrators or the participating staff.

The following recommendations were made:

- develop curriculum unit tests to measure student performance;
- program administrators should submit a comprehensive program description;
- all program administrators and staff should be required to thoroughly document their activities on a continuing basis; and
- program administrators should consider changing the name of the project and deleting references to the National Geographic Society, because the Society's materials may not be the most significant aspect of the program.

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I. PROGRAM DESCRIPTION

The purpose of the National Geographic Gifted Program was to "...utilize the National Geographic Society as a springboard to a truly differentiated curriculum for gifted students".* National Geographic Society materials, (books, periodicals, filmstrips, maps, etc.) supplemented by other appropriate materials and resources, were used to develop a curriculum that focused on selected geographical areas and cultures of the world. Curriculum instructional units emphasized concepts, methods, and analytical models associated with anthropology, archaeology, and sociology.

In 1981-82, the first year of the program, one instructional unit, which focused on Mexico, was implemented in fifth and sixth grade classes in two New York City public schools. In 1982-83, the second year of the program, 11 public schools and two private schools in seven New York City community school districts participated in the program.

The program was funded through a number of sources. The 1982-83 operating budget consisted of \$85,000 in tax levy funds and \$4,000 in materials and consultant services from the National Geographic Society. The program also received support in the form of one-third fare reductions on British Airlines for the spring, 1983, trip to Kenya, Africa.

GOALS AND OUTCOMES

One program document, Outline, National Geographic Gifted Pilot Program (see Appendix A), lists 20 goals and six expected outcomes*. Goals which were evaluated were:

* Spain, Minta. Outline, National Geographic Pilot Program. Draft submitted to Wendy Rogers, Manager, Educational Services, National Geographic Society, 1980.

- To develop pupil skills and knowledge horizontally (obtaining more facts) and vertically (in-depth enrichment).
- To expand the uses of National Geographic materials.
- To introduce anthropology, sociology, and archaeology as subjects in the elementary school curriculum.
- To foster in-depth knowledge of history and social studies.
- To develop high-level learning skills such as synthesis.
- To encourage institutional involvement in the educational process (e.g., Museum of Modern Art, Lincoln Center, etc.).

PARTICIPATING SCHOOLS, 1982-83

Thirteen elementary schools participated in the 1982-83 program (see Table 1). Eleven of the schools were located in Community School Districts (C.S.D.s) 4, 5, 13, 17, 28, and 29. Each of these districts was asked to select two schools to participate in the program. Two private schools, Dalton and Hunter College, also participated in the program.

PROJECT STAFF

The program was administered by an assistant superintendent in the Office of the Chancellor and a project director. Additional administrative support was provided by the coordinators of gifted and talented education in the participating school districts. These coordinators made the arrangements to release program teachers from classes so the teachers could attend staff development workshops and other program activities. The coordinators insured that project activities conformed to district gifted and talented education plans. Sixteen classroom teachers were involved in the program.

INSTRUCTIONAL PROGRAM

Three curriculum units developed by the assistant superintendent were employed by program teachers. The Colonial America unit was used in

the Dalton School and one class in P.S. 91. The Africa and African Cultures unit and the Archaeology unit were used by all other program teachers. Program administrators recommended that classroom teachers devote a minimum of five hours per week of class time throughout the school year to the program's curriculum units and designate one area in their classroom for National Geographic Society materials. National Geographic Society books, maps, films, film-strips, and bibliographies of appropriate articles in the Society's periodical, National Geographic, as well as a picture atlas and learning kits, were distributed to each teacher. The teachers also received a curriculum guide, in outline format, for each of the major instructional units. Program teachers were encouraged to draw on books, articles, and supplementary materials from other sources.

STAFF DEVELOPMENT

Program administrators held monthly group meetings with the program teachers. The administrators also met with individual teachers, building level administrators, and staff from the participating districts on a regular basis. Teachers and district gifted and talented coordinators participated in three staff development workshops during the school year. A workshop on the Archaeology unit was held October 29, 1982. In December, 1982, staff from the American Museum of Natural History conducted a workshop on Africa for program teachers. The third workshop on the "Renzulli model"* for educating gifted and talented children was held January 19, 1983.

* This was an all-day workshop conducted by Dr. Joseph Renzulli. He discussed his work with gifted and talented students and described his model for instruction.

Table 1
Participating Elementary Schools, National
Geographic Gifted Program, 1982-83

District	School	No. of Classes	Grade
4	83	1	5
	206	1	5/6
5	129	1	5
	200	1	5
13	20	1	6
	44	1	6
17	91	2	5,6
	397	1	5
28	220	1	5
	140	1	5
29	95	1	5
	Dalton Elementary school	2	5,6
	Hunter College Elementary School	2	5,6
TOTAL		16	

All program classes were allotted 15 hours of consultant time from the Learning Through an Expanded Arts Program (LEAP). The LEAP staff presented teachers and students programs on topics such as understanding history through art, archaeological reconstruction using fossil and fish prints, artifacts and data collection methods, textile arts, beadwork, pottery, architecture, rituals and festivals, and literature.

FIELD TRIPS

All project classes visited the Metropolitan Museum of Art on a field trip. The trips took place in November and December, 1982; two classes went on each trip. Program administrators scheduled an additional, special workshop in Art Conservation for students. These special workshops were conducted at the Metropolitan Museum of Art in the spring, 1983, and included topics such as methods of restoration, X-ray and microscopic examination of objects, and tools used in art restoration. Teacher workshops and class visits to the American Museum of Natural History were conducted in December, 1982. Program teachers also planned and conducted additional local field trips with their classes.

Two major field trips involving students and staff took place in 1982-83. In May, 1983, eight program teachers, two administrators, and 160 students visited Washington, D.C., met with National Geographic Society staff, and were presented to a number of congressional representatives. The second major field trip was a visit to Kenya, Africa for one program administrator, one private school principal, six teachers, and ten students from five C.S.D.s. A variety of methods were used to select the students who would make the Kenya trip. Three C.S.D.s used a competition of some form, either

a composition or special assignment, to determine who would go on the trip. One C.S.D. developed criteria and convened a selection committee which included parents to make the decision. The fifth C.S.D. used a lottery to make the choice. Funding for the trip was obtained from participating C.S.D.s, private donations, parent-sponsored fund raisers, and British Airlines gave the program a one-third discount on the tickets.

II. EVALUATION DESIGN

GOALS

The two major goals of the evaluation were to: (1) assess the overall effectiveness of the program, and (2) advise the program administrators regarding documentation of the program. The program administrators intended to submit the program to the New York State Education Department for validation as an exemplary program and encourage its replication to the National Diffusion Network's Joint Dissemination and Review Panel. Thorough documentation was also needed to provide the Chancellor's office with information that would allow them to make informed judgements about the program.

MAJOR EVALUATION AREAS

The evaluation analyzed the impact of the use of National Geographic Society materials in fifth and sixth grade classes of gifted and talented students. The major areas of emphasis in the evaluation were:

- the degree to which National Geographic materials met the need for global and multicultural studies curriculum materials for gifted and talented classes;
- the knowledge teachers and students gained by using National Geographic materials;
- the extent to which the acquisition of cognitive skills such as, analysis, synthesis, and evaluation, by students, was enhanced and reinforced by participation in the program;
- the program's utilization of non-school resources such as geographically accessible museums, university facilities, and expert professionals as additional enrichment; and
- the utilization of National Geographic materials in regular classes in the participating schools.

METHODOLOGY

Evaluation activities included: (1) a review of program documents and materials, (2) analysis of weekly teacher logs, (3) development and administration of questionnaires to principals, C.S.D. gifted and talented coordinators, and program teachers, and (4) observations.

Review of Documents

The evaluation team reviewed curriculum guides for the units on Archaeology, and Africa and African cultures. At the request of program administrators, the team did not review materials for the unit on Colonial America, because it was considered an experimental unit. The curriculum guides were reviewed to determine how National Geographic Society materials were used. Workshop materials were also reviewed to gain an understanding of staff development activities.

Teacher Log Sheets

The evaluation team developed log sheets (see Appendix B) which all program teachers were asked to complete each week. The logs were designed to determine the relationship between specific concepts, teaching objectives, skill areas, and instructional activities, as well as document any independent projects and special events.

Questionnaires

Questionnaires developed by the evaluation team were administered to selected school principals, all coordinators of gifted and talented education from participating C.S.D.s, and all program teachers (see Appendices C, D, and E). The questionnaires focused on program operations, program impact, and the respondents' recommendations for improving the program.

Observations

Observations were made in seven program classes (see Appendix F). The classroom visits enabled the evaluation team to observe the use of National Geographic materials in an instructional setting; the teacher's use of classroom displays such as maps, illustrations, student projects, artifacts, etc; and the instructional methods and techniques used. The evaluation team also attended one program staff meeting and a workshop (see Appendix G). The participants at each workshop were asked to complete evaluation surveys.

Documentation Activities

The evaluation team held a series of meetings with the program administrators to discuss program documentation. The team made recommendations regarding which aspects of the program should be documented, the type of documentation that could be used, and the timelines within which specific activities should be documented. The purpose of the recommendations was to enable the program to develop an information base that would meet New York State and National Diffusion Network validation criteria, as well as provide the Chancellor's office with information to assess the effectiveness of the program.

III. EVALUATION FINDINGS

EVALUATION QUESTION #1: TO WHAT DEGREE DID NATIONAL GEOGRAPHIC MATERIALS MEET THE NEED FOR GLOBAL AND MULTICULTURAL STUDIES CURRICULUM MATERIALS FOR GIFTED AND TALENTED CLASSES?

The National Geographic Society provided materials in the forms of books, periodicals, films, and other instructional aids to all participating classes. Program teachers who completed the log sheets reported that they had used the National Geographic materials for approximately 56 percent of the class time they spent on related instructional activities. Eleven of the 16 teachers (69 percent) completed the evaluation questionnaire and ten of the eleven respondents (91 percent) gave high ratings to the quality of the National Geographic materials. Eight of the eleven respondents (73 percent) also gave high ratings to the quality of the program materials that were not produced by the National Geographic Society. In general, the teachers were very enthusiastic about the quality and appropriateness of the National Geographic materials.

Three of the five school principals interviewed cited the materials the program had provided as one of the major contributions of the program. One of the gifted and talented coordinators specifically mentioned: "...the wealth of curriculum material..." as one of the most significant aspects of the program.

Seven classrooms were observed. At the time of the observations, four of the public school classes focused on various aspects of African life and culture and two of the classes had lessons on archaeology. All of the classrooms displayed examples of students' writings and exhibits related to archaeology. Two classes had mini-libraries and four classes contained

exhibits such as baskets, banners, pennants, masks, fabric prints, and maps. In sum, the materials were perceived as high quality and relevant, were reported employed about half the time, and were available or displayed in the observed classroom.

EVALUATION QUESTION #2: WHAT KNOWLEDGE
DID TEACHERS AND STUDENTS GAIN FROM USING
NATIONAL GEOGRAPHIC MATERIALS?

From the information available, this evaluation question could not be answered. In the absence of objective test data, the evaluators approached the question indirectly. Five district coordinators of gifted and talented education were interviewed by telephone. All of them stated that the program was important because it offered a wealth of curriculum materials and sophisticated resources, involved students in high-level research, and provided a series of "well coordinated" workshops for teachers and students. All of the respondents were impressed with the program and described it as more sophisticated in approach and activities than other programs. One coordinator said the program compared favorably with junior high school gifted and talented programs.

EVALUATION QUESTION # 3: TO WHAT EXTENT
WAS STUDENTS' ACQUISITION OF COGNITIVE
SKILLS SUCH AS ANALYSIS, SYNTHESIS, AND
EVALUATION ENHANCED AND REINFORCED?

Evidence from several sources indicated the program involved students in activities which required the use of higher-order cognitive skills. An analysis of the teacher log sheets indicated that teachers were using instructional activities that involved higher-order skills of comprehension,

application, analysis, synthesis, and evaluation. In addition, many of the students' assignments involved the utilization of advanced cognitive skills. However, the extent and frequency of student use of these skills could not be determined from the logs. Because of the absence of a testing program developed specifically for the program's curriculum and instructional activities there is no quantitative evidence indicating that the program had a positive impact on cognitive skills development. One of the principals who was interviewed stated that students' writing and verbal skills had improved and they were better able to interpret, analyze, and synthesize materials as a result of the program.

The teacher logs were an excellent source of anecdotal information about the acquisition of cognitive skills by students, when the logs were completed properly. Some teachers were more thorough than others in terms of the content of the logs and, as a result, the sparse information in many of the log sheets often gave a false representation of the quality and scope of the actual classroom activities.

EVALUATION QUESTION #4: DID THE PROGRAM
UTILIZE NON-SCHOOL RESOURCES SUCH AS
GEOGRAPHICALLY ACCESSIBLE MUSEUMS,
UNIVERSITY FACILITIES, AND EXPERT PROFES-
SIONALS AS ADDITIONAL ENRICHMENT?

The use of consultants, experts, and area resources was built into all of the curriculum units. For example, LEAP consultants conducted archaeology workshops, and visits to area museums were scheduled to compliment the curriculum content. Program administrators compiled and distributed information on museum activities and resources to the teaching staff. A number of teachers organized their own field trips which used area resources. For ex-

ample, one teacher arranged for a class visit to the Jewish Museum, where the students were given a guided tour and workshop on archaeology in the Middle East. Students constructed oil lamps from clay while they were at the museum and subsequently wrote papers on conducting an archaeological excavation and describing the type of ancient house they would build.

All of the teacher respondents who attended the archaeology and Metropolitan Museum of Art workshops gave those workshops high ratings. Ten of the eleven teachers rated LEAP consultants as extremely useful and the eleventh rated LEAP consultants as useful. Seventy-percent of the teachers who attended the Renzulli Method workshop gave that workshop a high rating. The trip to Washington, D.C. was given high ratings by 56 percent of the respondents who attended. The trip to Kenya was not rated because it took place in June, after the questionnaires were returned.

EVALUATION QUESTION #5: WAS THERE UTILIZATION
OF NATIONAL GEOGRAPHIC MATERIALS IN REGULAR CLASSES
IN THE PARTICIPATING SCHOOLS?

The National Geographic materials were shared with non-program teachers in the school building. Ten of the eleven respondents (91 percent) indicated that they had met with other teachers in their schools to discuss the program. Nine teachers (82 percent) said that other teachers had used program materials or techniques on one to four occasions.

One of the principals who was interviewed indicated that program teachers shared student projects with other staff, some of whom developed similar projects in their own classes. Another principal stated that program teachers shared filmstrips with others. In one school, the librarian assisted by making research materials available to the project. In another school, the

principal noted that while other fifth grade teachers were somewhat involved with the program, communication in that area needed to be improved.

Coordinators of gifted and talented education in two districts mentioned that films and other materials were shared with other staff. In two other districts, the coordinators stated that other staff were not involved in the program. The remaining coordinator cited an article written by two program teachers for the district newsletter and a plan to include National Geographic Society materials in a proposed district resource room for the gifted and talented as examples of other staff involvement with the program.

DOCUMENTATION ACTIVITIES

Helping the program develop an adequate system of documentation was one of the evaluation team's major concerns. O.E.A.'s objective was to assist program staff in building an information base and documentation system that would measure up to stringent outside review. The program administrators intended to submit program validation applications to both the New York State Education Department and the Joint Dissemination and Review Panel. The administrators also wanted to develop descriptive materials about the program suitable for distribution to interested parties. A third consideration, and perhaps the most important one, was the need to develop a system of documentation that would provide the Central Board with sufficient information to make informed judgments about the program.

The evaluators offered advice and made recommendations regarding documentation procedures from the outset of the evaluation. The team emphasized the need for the program staff to develop and document:

- the background and history of the program,
- clearly stated and precise goals and objectives,
- measurable projected outcomes,
- content area pre- and posttests for all curriculum units, and
- the implementation of activities for all program areas.

The evaluation team also arranged a meeting between the program director and the director of the New York State Education Department's Validation Unit, which is responsible for certifying exemplary programs. The Director of the Validation Unit suggested that extensive documentation was essential to the validation process and reinforced and supported the suggestions the evaluation team had made to the project administrators on prior occasions.

Teacher Log Sheets

Obtaining thorough and consistent documentation from program teachers through the teacher log sheets was a major problem for the evaluation team. The logs were designed to record the relationship between specific concepts, teaching objectives, skill areas, and instructional activities. The log also served to document independent projects and special events. Completing the logs required approximately 30 minutes per week. The rate of return of the logs was very poor. On the average, seven of the 16 teachers (44 percent) turned in logs for each two-week reporting period. Obtaining consistent and comprehensive documentation from the teaching staff was a problem through to the end of the year. None of the teachers at either Dalton Elementary or Hunter College Elementary School completed logs.

IV. CONCLUSIONS AND RECOMMENDATIONS

The program generated a considerable amount of enthusiasm among program staff, coordinators of gifted and talented education in the participating districts, school principals and school teachers who were highly positive about the usefulness of the materials. Students appeared to be enthusiastic about the materials as well as the numerous related activities and projects that were scheduled. The National Geographic Society materials were seen as appropriate for the participating classes' needs for global and multicultural studies curriculum materials for gifted and talented classes. Program teachers used the society's materials for about 50 percent of the classroom time spent in instructional activities. The major problems respondents associated with the materials were organizational, i.e., there were not enough materials and the distribution system needed improvement.

The majority of the teacher respondents perceived that the knowledge and cognitive skills of the students were improved. It was apparent in the classroom observations that students were learning. The various products and projects that students created were also indicative of expanded knowledge and the acquisition of new skills. The weekly logs of the few program teachers whose recordings were thorough supported these perceptions.

The program made good use of non-school resources such as museums and expert professionals in the metropolitan area. New York City's exceptional museums were a particularly outstanding asset to the program because the museum exhibits and professional staff resources related directly to the instructional content students were being taught.

The sharing and use of National Geographic Society materials in regular classes in the participating schools was limited. Although 91 percent of the teachers who participated in the program stated that they discussed it with non-participating teachers, non-participants used the materials infrequently (one to four occasions). This could, in part, be due to the fact that the materials were in short supply and were husbanded by program teachers. It is clear, however, that in many instances, communications and relations between program staff and other school personnel could be improved.

The most glaring weakness in the program was the failure to adequately document the program. There were problems with documentation at all levels of program staff. Many of the teachers, despite verbal and written encouragement from the program administrators and the evaluation team, were not expansive in their comments on the weekly teacher logs and did not complete evaluation forms for workshops. The fact that basic information about the program was not written down by the program administrators demonstrates the lack of commitment to documentation of the program.

RECOMMENDATIONS

The following recommendations are made for program improvement.

- Develop curriculum unit tests to measure student performance.
- Program administrators should submit a comprehensive program description.
- Require and enforce a policy that all program staff should thoroughly document program activities on a continuing basis.
- Program administrators should consider changing the name of the project and deleting references to the National Geographic Society, because the Society's materials may not be the most significant aspect of the program.

D R A F T

OUTLINE

NATIONAL GEOGRAPHIC GIFTED PILOT PROGRAM

TO: Wendy Rogers
Manager, Educational Services
National Geographic Society

FROM: Minta Spain *M.S.*
Assistant to the Chancellor
Board of Education of the City of New York

1980

PURPOSE

The purpose of this pilot program is to utilize the National Geographic Society as a springboard to provide a truly differentiated curriculum for gifted children, that can serve as a paradigm for dissemination throughout the New York City School System, and other school systems in this country. The program will also initiate the "halo effect," so that all pupils in a specific target school will eventually benefit from an enriched school environment.

GOALS

1. To enhance the interdisciplinary approach to learning.
2. To develop pupil skills and knowledge horizontally (obtaining more facts) and vertically (in-depth enrichment).
3. To expand the uses of National Geographic materials.
4. To develop map and globe skills.
5. To develop heightened career awareness and career guidance. Pupils will become aware of job fields such as oceanography, marine biology astrophysics, etc.
6. To develop writing and research skills.
7. To develop a team teaching approach to education (sharing, development of reusable units, files).
8. To maximize utilization of staff skills in all areas.
9. To develop a National Geographic resource room or area.
10. To cultivate the inception of peer-tutoring.
11. To develop a multi-media approach to learning (utilizing video-cassettes, video-recorders, computer programming, etc.).
12. To introduce anthropology, sociology and archaeology as subjects in the elementary school curriculum.

13. To improve self-image (pupils).
14. To foster in-depth knowledge of history and social studies.
15. To increase the role of the Arts in the curriculum.
16. To develop skills in independent study.
17. To develop creativity skills.
18. To develop high level learning skills such as synthesis.
19. To introduce and foster Values Clarification through the study of various cultures and mores.
20. To encourage institutional involvement in the educational process (e.g., Museum of Modern Art, Lincoln Center, etc.).

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RELATED ACTIVITIES

1. The initial unit will include Mexico - grades 5 and 6. The units of Delaware Water Gap (rivers-tributaries), and Williamsburg, Virginia may be used after HCES staff is consulted.
2. Use of the contract system with units.
3. Study of the classics.
4. Integration with school (increase writing skills) and New York City (understanding current events) newspaper activities.
5. Club periods enhanced by National Geographic (archaeology as a club, etc.).
6. Use of mentors and guest speakers (within and outside of the community).
7. New York as a learning laboratory -- field trips, etc.).
8. Expanded trip involvement - Mexico, Delaware Water Gap, Williamsburg. Participating pupils can serve as school "data banks."
9. In public schools the regular social studies curriculum can be telescoped into a smaller time frame for the gifted pupil. The National Geographic program can be used to enhance the social studies units.
10. High visibility and publicity will be provided for the National Geographic Society through Sol Meldon, Coordinator of Gifted Programs, Board of Education.

11. An outside publisher is also interested in publishing the results of this program.
12. A New York City Board of Education Manual can be promulgated based on this pilot program.

SUBJECTS, TIME FRAME

SUBJECTS

Grades 3-6, at Hunter College Elementary School for the Gifted. Dr. Stanley Seidman is the principal. We will begin initially with grades 5 and 6, and then develop units for grades 3 and 4.

TIME FRAME - APRIL 1981 - JUNE 1982

- (1) April 1981 - August 1981 will consist of research workshops, writing of curriculum, etc.
- (2) The program will begin in September 1981.
- (3) There will be on-going evaluation and workshops.
- (4) By the end of June 1982, a written manual will be promulgated which may be utilized by other schools.

PHILOSOPHICAL BACKGROUND

Abstracts will be forwarded to you, if necessary, at a later date.

- (1) Dr. Guilford - "Structure of the Intellect" - particularly the development of divergent production, transformations, etc.
- (2) Dr. Tannenbaum - "Core Enrichment Curriculum" - After the gifted child has learned the "basic" core of the curriculum, he must be provided with a differentiated and highly enriched program.
- (3) Dr. Eberle, Dr. Parnes, Dr. Torrance - Creative learning strategies: The development of learning strategies specifically in fluency, imagination, flexibility, risk taking, divergent thinking, etc.
- (4) Dr. Bloom - "Bloom's Taxonomy - Affective/Cognitive Domains" - particularly the development of synthesis, evaluation, etc.
- (5) Dr. Bruner - The Process of Education - Hypothesis: Any subject can be taught effectively in some intellectually honest form to any child at any stage of development. Jerome Bruner's philosophy was partially used for the revision of some New York City Board of Education, curriculum bulletins in the 1960's.

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(6) Dr. Renzulli - "Renzulli's Triad" - particularly type III of the Triad (emphasis on individual and small group investigation of real problems, collection of raw data, and creation of a final product). Dr. Renzulli's Triad will be the connecting vehicle that will utilize the models listed above. I will try to obtain Dr. Renzulli and Dr. Tannenbaum for teacher training workshops.

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NEEDED INPUT FROM THE NATIONAL GEOGRAPHIC SOCIETY

1. Meeting with Hunter College Elementary School (HCES) Staff (May, June - if possible).
2. Use of HCES as a pilot school for testing new products (posters, etc.).
3. Provide materials for HCES.
 - a. magazines
 - b. kits
 - c. films
 - d. filmstrips
 - e. maps
 - f. indexes
 - g. relevant back issues
 - h. other
4. HCES pupils will visit the National Geographic Society.
5. Relevant educational input.
6. Provide appropriate contacts (e.g., names of archaeologists).

FUNDING

We are exploring:

- (1) United States Office of Education
- (2) Private sources - A list of final choices
-will be forwarded to you at a later date.
- (3) Parents

Funding is necessary for the planned extended trips --
Mexico, etc.

EXPECTED OUTCOMES

1. Preparation of gifted pupils as world leaders and citizens of the world.
2. Elimination of Cultural/Class barriers (pupil-pupil, teacher-pupil) through the study of various cultures and values clarification.
3. The development of a "global" approach to understanding history and current events. For example:
 - a. The similarities and differences among all ethnic groups.
 - b. The relationship between history, world events, natural boundaries, and natural phenomena.
 - c. Understanding the relationship of artistic development to historical events.
4. Development of problem solving strategies that will enable pupils to draw their own conclusions based on research and judicious application of facts that are obtained.
5. Development of a curriculum that can be replicated and disseminated.
6. Development of the pupil as a "self-teacher."

TEACHER'S WEEKLY LOG
NATIONAL GEOGRAPHIC GIFTED PROGRAM

Week Beginning: _____

School: _____

Teacher's Name: _____

Class Grade: _____

AMOUNT OF CLASS TIME DEVOTED TO THE
PROJECT FOR THE WEEK
Number of hours: _____

Curriculum Unit: _____

Concept/Area	Teaching Objective	Skills Involved	Whole Class/Small Group Activities	Materials Used	Comments	Individual Pupil Project	Comments
		I. Comprehension Translation Interpretation Extrapolation					
		II. Application					
		III. Analysis					
		IV. Synthesis					
		V. Evaluation					
		VI. Other (Specify)					

Appendix B

PLEASE LIST BELOW (BY AUTHOR, TITLE, ETC.) THE BOOKS,
MAGAZINES, ARTICLES AND OTHER MATERIALS THAT YOU
USED DURING THIS WEEK WHICH ARE RELATED TO THE
PROJECT.

NATIONAL GEOGRAPHIC GIFTED PROGRAM
LOG INFORMATION SHEET

Archaeological Concept Area:

What major part of the Unit Curriculum is the lesson(s) focused on?

- Archaeological dating techniques
- Conducting an archaeological investigation
- Literature and archaeology

Teaching Objective:

What do you expect that students will learn as a result of studying this area/concept?

Skills Involved:

What skills are students learning or refining as a result of study in this area? Check off as many as apply. (Refer to skill definitions)

Whole Class/Small Group Activity

Briefly describe the activities that were involved with teaching the concept. For example class discussion, role playing, music appreciation, art activities. If a consultant gave a workshop, please indicate. If a field trip was taken, please indicate.

Materials

Please list the materials used in teaching the concept-e.g. books, film strip, magazines, teacher made materials.

Comments

Briefly comment on any positive or negative outcomes of the lesson. For example did students respond enthusiastically to the materials. Was any teaching approach particularly successful? Did the lesson act as motivation for independent research? Were any class projects initiated as a result of the lesson? Record any other significant information/events which have not been already mentioned.

Individual Pupil Activities

Did students engage in any independent projects during the week? Please describe briefly the nature of the student's project and materials/sources that were used. What was the motivation for doing the project? Include here descriptions of small group (2-3) independent projects.

Comments

Briefly describe what skills or knowledge were refined by the students through their involvement in the project.

NATIONAL GEOGRAPHIC GIFTED PROGRAM SKILL DEFINITIONS

Dear Colleague,

The following intellectual skills and definitions have been extracted from Bloom's Taxonomy of Educational Objectives. Please use the definitions provided as a guide in completing the skills checklist of your program log. Also included under each definition of a skill is an example of how the skill applies to a segment of the archaeology curriculum.

I. COMPREHENSION

Comprehension is defined as an individual's ability to make use of material communicated without necessarily relating it to other material or seeing its full implications. Comprehension is divided into the following three skill areas, which are: translation, interpretation, and extrapolation.

Translation: Translation means that an individual can put a communication into other language or other terms. The following skills and abilities are general examples of translation.

- Ability to translate a technical problem into one's own words.
- Given geometric concepts in verbal terms, the ability to translate into visual or spatial terms.
- Ability to prepare graphical representations of observed or recorded data.

Example of Translation in the Archaeology Curriculum

An archaeologist uses the technique of chromatography to identify organic substances. In your own words, what is chromatography?

Interpretation: The essential behavior in interpretation is that when given a communication, the student can identify and comprehend the major ideas which are included in it as well as understand their inter-relationships. It requires the ability to go beyond repetition and rephrasing of a document to determine the larger and more general ideas contained in it. The following skills and abilities are general examples of interpretation.

-The ability to interpret various types of social data.

-The ability to grasp the thought of a work as a whole at any desired level of generality.

Example of Interpretation in the Archaeology Curriculum

After students have built an excavation box, ask: why is the latest level on top? What development stages do you see from bottom to top? List the differences you see.

Extrapolation: Extrapolation requires that the reader be able to translate as well as interpret the document, and in addition, he must be able to extend the trends or tendencies beyond the given data findings of the document to determine implications, consequences, corollaries, effects, etc. which are in accordance with the conditions as described in the original document. The following skills and abilities are general examples of extrapolation:

-Ability to draw conclusions and state them effectively.

-Skill in interpolation when there are gaps in data.

-Skill in predicting continuation of trends.

Example of Extrapolation in the Archaeology Curriculum

Having studied coins from different parts of the world, what things can you infer about the people from their coins?

II. APPLICATION

Application involves using general ideas, technical principles, theories or methods in particular and concrete situations. Application involves the carry over of principles or techniques learned in one context to a different context. The following skills and abilities are general examples of application.

-The ability to apply social science generalizations and conclusions to actual social problems.

-The ability to apply the laws of geometry to practical situations.

Example of Application in the Archaeology Curriculum

Have your students study the various forms of dating. Then have your students date objects easily accessible in their environment.

III. ANALYSIS

Analysis involves the breakdown of material into its constituent parts and detection of the relationship of the parts and of the way they are organized. The following skills and abilities are general examples of analysis:

- Ability to infer the author's purpose point of view, or traits of thought and feeling as exhibited in his work.
- Ability to distinguish cause and effect from other sequential relationships.
- Ability to recognize unstated assumptions.
- Skill in distinguishing facts from hypotheses.
- Ability to distinguish a conclusion from statements which support it.
- Ability to recognize which facts or assumptions are essential to a main thesis or to the argument in support of that thesis.
- Ability to detect logical fallacies in arguments.

Example of Analysis in the Archaeology Curriculum

Why were the Leakeys so convinced that fossil bones of pre-historic man could be found at Olduvai Gorge? How did this conflict with current archaeological theory of the day (1950's)?

IV. SYNTHESIS

Synthesis is defined as the putting together of elements and parts so as to form a whole. This is a process of working with parts and combining them in such a way as to constitute a pattern or structure not clearly there before. Synthesis is the cognitive skill which most clearly calls for creative behavior on the part of the student. The following skills and abilities are general examples of synthesis.

- Skill in writing, using an excellent organization of ideas and statements.
- Ability to write creatively for personal pleasure or for the entertainment or information of others.
- Ability to integrate the results of an investigation into an effective plan or solution to solve a problem.
- Ability to formulate appropriate hypotheses based upon an analysis of factors involved.

Example of Synthesis on the Archaeology Curriculum

Based up on what you have learned about the Early Stone Age, Middle Stone Age, Late Stone Age design your own excavation box.

What sites in New York City based on your independent study and research would be logical places to start an archaeological dig. Why? How would you conduct a dig at that site?

Outline a plan for conducting a dig.

V. EVALUATION

Evaluation is defined as making quantitative and qualitative judgments about the extent to which material and methods satisfy criteria. The criteria used may be either those determined by the student or those which are given to him. The following skills and abilities are general examples of evaluation.

- Ability to assess whether a writer (or speaker) has been consistent in his use of terms, that one idea follows from another, and that conclusions follow logically from the material presented.
- Ability to compare major theories, generalizations, and facts about particular cultures.
- Skill in recognizing and weighing values involved in alternative courses of action.

Example of Evaluation in the Archaeology Curriculum

If you were given unlimited staff and funds, where would you begin an archaeological investigation and why?

VI. OTHER

If you are teaching a skill which you feel does not fit into any of the above areas, please describe.

NOTE: Please keep in mind that activities/lessons that you teach will often involve a combination of the above skill areas.

OFFICE OF EDUCATIONAL EVALUATION
INSTRUCTIONAL SUPPORT EVALUATION UNITNational Geographic Gifted Program
Principals' Interview Form

1. What contributions has the National Geographic Gifted Program made to your school's gifted program?

2. What effect, if any, has the program had on other gifted or regular classes in your school or district, i.e., halo or filtering-down effect?

3. Describe how other teaching staff participate or collaborate with the program.

4. Do you monitor the progress of individual students in the program?

YES _____

NO _____

If yes, how do you monitor their progress?

test reports _____

student interviews _____

report cards _____

classroom observation _____

teacher interviews _____

other _____
(specify)

5. How have parents reacted to this program in your school?

6. What recommendations would you make to improve the program?

School _____

OFFICE OF EDUCATIONAL EVALUATION
INSTRUCTIONAL SUPPORT EVALUATION UNIT

NATIONAL GEOGRAPHIC GIFTED PROGRAM
C.S.D. GIFTED AND TALENTED COORDINATOR TELEPHONE INTERVIEW

1. Please describe your role and responsibilities in the National Geographic Gifted Program.

2. How many visits have you made to program sites since September, 1982?

Number of Visits _____

3. Please describe how your office monitors the project.

4. Please describe the significance of the project in relation to other gifted and talented programs in your district.

5. Briefly describe how other school site staff are involved in the project?

District Coordinator Telephone Interview

- 6. Briefly describe the process used to select the students who are going to Kenya.

7. What recommendations would you make to improve the project?

O.E.E. 5/83

OFFICE OF EDUCATIONAL EVALUATION
INSTRUCTIONAL SUPPORT EVALUATION UNIT

National Geographic Gifted Program
Teacher Questionnaire

To the Teacher:

In 1981-82, teachers' responses to a program wide survey provided insights which guided program developers in 1982-83. We are again asking you to share your impressions with us. Your responses will help shape the program in the future. Neither you nor your school will be identified in our report. Thank you for your continued cooperation.

1. School Name: _____

2. Is this your first or second year with the National Geographic Gifted Program? (Circle one.) 1 2

3. Following are workshops and special events held by the program; please indicate whether you attended, and if so, if it was useful to you.

WORKSHOP OR EVENT	DID YOU ATTEND? (Circle One)		RATING (Circle One)				
			Not Useful		Extremely Useful		
Archeology Workshop	YES	NO	1	2	3	4	5
Renzulli Workshop	YES	NO	1	2	3	4	5
Metro. Mus. of Art Workshops	YES	NO	1	2	3	4	5
LEAP Consultants	YES	NO	1	2	3	4	5
Trip to Washington	YES	NO	1	2	3	4	5

4. Please rate the adequacy of the following:

	LOW					HIGH	
a. the quality of National Geographic Society materials	1	2	3	4	5		
b. the quantity of National Geographic Society materials	1	2	3	4	5		
c. the quality of the materials provided by the program which were not produced by the National Geographic Society	1	2	3	4	5		
d. the quantity of the materials provided by the program which were not produced by the National Geographic Society	1	2	3	4	5		

5. How often has the program coordinator or program director visited your classroom:

twice a month (or more) _____
 once a month _____
 every two months _____
 once a semester _____
 once _____
 has not visited this year _____

6. How much assistance has the program coordinator or director been able to give you with respect to

	VERY LITTLE			VERY MUCH	
providing instructional support?	1	2	3	4	5
communication with parents?	1	2	3	4	5
progress of individual students?	1	2	3	4	5

7. Have you ever met with other teachers in the school to discuss the program?

YES _____ NO _____ How often? _____

8. Have any other teachers in the school used materials or techniques from the program?

YES _____ NO _____ How many? _____

9. How can the program be improved next year? _____

OFFICE OF EDUCATIONAL EVALUATION
INSTRUCTIONAL SUPPORT EVALUATION UNIT

National Geographic Gifted Program
Classroom Observation Form

Teacher: _____

Date: _____

School: _____

Students Registered: _____

Grade: _____

Students Present: _____

1. Description of Lesson

Purpose: _____

Student Tasks: _____

2. Teacher uses National Geographic materials:

- ____ whole class instruction
____ small group instruction
____ prescribing activities to individual students

3. Classroom displays

- ____ maps
____ illustrations of Africa
____ student work/writing
____ artifacts from Africa
____ displays related to archeology.

Others (describe):

4. Are 80 percent of the students engaged on/task and interested in the lesson?

10 minutes into class	Yes	No	N/A
20 minutes into class	Yes	No	N/A
30 minutes into class	Yes	No	N/A
40 minutes into class	Yes	No	N/A

5. The teacher presented instruction actively and clearly by:

a. moving quickly into the lesson with little time	Y	N	N/A
b. outlining the lesson before proceeding	Y	N	N/A
c. reviewing previous related instructions	Y	N	N/A
d. explaining: a) concept	Y	N	N/A
b) relationship of task to objective	Y	N	N/A
e. demonstrating how to do the task(s)	Y	N	N/A
f. questioning students to check their understanding	Y	N	N/A
g. responding to students' questions about what they are to do	Y	N	N/A
h. summarizing what was presented	Y	N	N/A

6. The teacher engaged students in instruction by:

a. briefly telling students to attend to tasks	Y	N	N/A
b. signalling students to get to work	Y	N	N/A
c. preventing potential disruption	Y	N	N/A
d. quickly resolving student misbehavior	Y	N	N/A
e. quickly reminding students of the social rules for appropriate behavior	Y	N	N/A
f. encouraging students to maintain pace	Y	N	N/A
g. adjusting pace of instruction according to students' needs	Y	N	N/A

7. The teacher monitored students' progress and provided instructional feedback to students by:

a. reviewing students' work when it was completed	Y	N	N/A
b. monitoring students' oral responses	Y	N	N/A
c. questioning students to assess if a concept was learned	Y	N	N/A
d. collecting students' work	Y	N	N/A
e. telling students an answer or task was correct or incorrect	Y	N	N/A
f. modelling appropriate responses for students	Y	N	N/A
g. demonstrating how to complete work correctly	Y	N	N/A

8. Spinoff Projects planned:

9. Comments

National Geographic Gifted Program
Workshop Evaluation Form

Workshop Date: _____ Job Title: _____

Workshop Topic: _____

I. Rate the workshop according to the following categories:

	Excellent	Good	Fair	Poor	Inadequate
1. Overall presentation	1. ()	()	()	()	()
2. Applicability to your classroom	2. ()	()	()	()	()
3. Content/ideas discussed	3. ()	()	()	()	()
4. Style/method of presentation	4. ()	()	()	()	()
5. Speaker's knowledge of subject	5. ()	()	()	()	()
6. Speaker's knowledge of the classroom situation	6. ()	()	()	()	()
7. Speaker's facility in answering questions	7. ()	()	()	()	()
8. Value of handouts/materials distributed	8. ()	()	()	()	()

II.

1. List the most helpful or important aspects of the workshop.

2. List the least helpful or important aspects of the workshop.

3. Additional Comments:
